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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,818	01/04/2001	Toshihiko Higuchi	81754.0048	3513

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EXAMINER

CAO, PHAT X

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,818

Applicant(s)

Higuchi

Examiner

Phat X. Cao

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 29, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-11 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

1. The cancellation of non-elected claims 15-20 in Paper No. 6 is acknowledged.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

3. Figures 6-9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 and 12 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mehta (US. 6,362,527).

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Mehta, in Fig. 2D, discloses a semiconductor device having a wiring pattern, the semiconductor device comprising: a contact section 14 formed in an interlayer dielectric layer; a first wiring 6 (left wiring) formed over the interlayer dielectric layer and disposed with a separation from the contact section shorter than a specified separation ; and a second wiring 6 (right wiring) having a connection region to be connected to the contact section 14, wherein the connection region of the wiring 6 has a generally square plan configuration, the second wiring 6 has at least one extension section extending in a non-wiring region and disposed in at least one section of the connection region other than sides thereof facing the first wiring.

Note that process limitations (formed by etching, using a resist pattern as a mask), do not carry weight in a claim drawn to structure. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

6. Claims 12-14 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Geryk (US. 6,166,441).

Geryk, in Fig. 5, discloses a semiconductor device having a wiring pattern, the semiconductor device comprising: a contact section formed over an interlayer dielectric layer; and a wiring 550 having a connection region to be connected to the contact section, wherein the connection region of the wiring has a generally square plan configuration, the wiring has extension sections on four sides of the connection region and at least one of the extension sections extending in a non-wiring region in the connection region.

Note that process limitations (formed by etching, using a resist pattern as a mask), do not carry weight in a claim drawn to structure. In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

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7. Claims 1, 2-6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bush et al (US. 6,380,554) in view of Fulford, Jr. et al (US. 5,916,715).

Bush, in Fig. 3, discloses a semiconductor device having a wiring pattern, the semiconductor device comprising: a contact section 54 (not illustrated, see column 8, lines 16-20); a first wiring 72a disposed with a separation from the contact section shorter than a specified separation; and a second wiring 52 having a square connection region to be connected to the contact section, wherein the second wiring 52 has an extension section extending in a non-wiring region and disposed in at least one section of the connection region other than sides thereof facing the first wiring 72a, and wherein the extension section has an extension length identical with the width of the wiring.

Bush does not disclose the contact section formed in an interlayer dielectric layer.

However, forming the contact section of Bush in the interlayer dielectric layer would have been obvious because it is well known to one skilled in the art for the purpose of protecting the contact section from the outside environment. Such well known feature is shown by contact section 10 formed in the dielectric layer 12 as taught in Figs. 3b and 4a of Fulford.

Allowable Subject Matter

8. Claims 7-11 are allowed.


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The prior art of record fails to disclose the combination of the device structure recited in the base claim, including the feature of having a first wiring disposed with a minimum inter-wiring separation with respect to the contact section.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phat X. Cao whose telephone number is (703) 308-4917. The Examiner can normally be reached on Monday through Thursday. If attempts to reach the Examiner by telephone are unsuccessfully, the Examiner's supervisor, Olik Chaudhuri, can be reached on (703) 306-2794.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956. Group 2800 fax number is (703) 308-7722 or (703) 308-7724.

PC
June 14, 2002


PHAT X. CAO
PRIMARY EXAMINER